



Chapter Five

ENVIRONMENTAL CONSEQUENCES

Introduction

The purpose of this section is to discuss the impacts on the environment caused by changes brought about by the alternatives. A general discussion of the consequences by alternative is followed by a discussion of developed areas. Subsequent plans will address the details of specific actions.

General Consequences of the Alternatives

The following topics are addressed:

- Long-term integrity of natural systems
- Long-term integrity of cultural resources
- Visitor experience and access to National Area resources
- Public understanding of National Area resources and management
- Economic contribution to the surrounding region
- Consistency with the plans of others

Consequences of the No-Action Alternative

This alternative is defined as a picture of current conditions and management. The information included in the Affected Environment section supplements this discussion.

On Long-Term Integrity of Natural Systems

Present NPS staffing levels and data are insufficient to effectively mitigate all the impacts on natural resources and systems stemming from activity both outside and inside the National Area. The land uses in the watershed described in the Affected Environment section present serious problems for meeting required management for water quality. The forest within the National Area is in a general state of recovery to a condition that would provide healthful habitat for desirable wildlife. Oil and gas development both outside and inside the boundary remains an activity with unknown potential for greater

disruption. Gaining cooperation and establishing coordinating mechanisms with the wide array of agencies, jurisdictions, and private entities whose activities affect the National Area remain largely long-term goals. Visitors to the National Area are overusing some facilities such as certain trails and are also inappropriately, and in some cases illegally, using sensitive, readily accessible resources such as rock shelters and arches.

These outside and inside uses are continuing their adverse impacts, which include water pollution of certain streams and stream segments, erosion of both soils and rock formations, and individual losses of certain species of concern.

On Long-Term Integrity of Cultural Resources

The proper protection and use of the vast array of cultural resources in the National Area present to the available staff an impossible goal. The thousands of rock shelters, the many remaining historic structures, fields, and landscapes, and the large and growing collection of historic and prehistoric objects are being lost to natural deterioration as well as accelerated deterioration through inappropriate use, overuse, and inadequate storage. Focusing on selected resources has been the only way to achieve limited objectives.

On Visitor Experience and Access to National Area Resources

A variety of natural and cultural features are readily available, including the river, canyon rim views, and certain historic sites. Many other features are available depending on visitor interests and abilities. Motor vehicle access to many sites in the gorge remains largely curtailed due to legislative restrictions. There is access to game for hunting, in accordance with the legislation. Uncrowded areas and solitude are widely available, due in part to current levels of use. Access to anywhere in the National Area is a function of available roads and trails, which are located and are in conditions that sometimes limit access to certain resources. Lack of adequate maintenance of over 600 miles of roads and

trails is contributing to a decline in visitor experience quality.

On Public Understanding of National Area Resources and Management

Public education programs and exhibits exist on- and off-site on a variety of resource-related subjects. General, informal outreach to the communities by National Area personnel assists in maintaining a dialogue concerning issues of mutual interest; however, reasons for certain management actions remain unclear to many. There are known communication deficiencies National Area staff would like to address.

On an Economic Contribution to the Surrounding Region

Nearby communities are experiencing direct benefits of expenditures by NPS for supplies and by individual NPS employee purchases. National Area employee salaries total over \$3,000,000, which directly benefits the local economy. Indirectly, benefits are occurring from visitors' spending for goods and services. Disagreement exists as to the amount, or level, of benefits the region should be experiencing at this point in time. The numbers of visitors to the National Area predicted by a 1974 study have not materialized nor have the predicted benefits. Some believe this is because facility development in the National Area is not complete, and others believe this is because the communities have not responded to the opportunity by providing more services. In fact, a number of assumptions in the early study were not included in the National Area when it was authorized by Congress. Consequently, the National Area as authorized was significantly different from the 1974 study proposal. Regardless, the area remains largely unknown to many potential visitors, although this is changing.

Currently, the numbers of visitors coming to the National Area are coming with the expectations of certain conditions, facilities, and experiences. It is unknown how long these can continue to be offered at an acceptable level of quality. It is possible that the present visitor numbers could decrease as National Area personnel find it increasingly difficult to provide visitor satisfaction. As quality declines, visitation may also decline along with associated benefits to the economy.

On Consistency with the Plans of Others

Community goals in the surrounding counties were identified during the preparation of comprehensive plans prepared in the 1980s. Generally, they include providing for beneficial interrelationships between work, living, and recreational areas, protecting natural resources for the use and enjoyment of present and future citizens and visitors, developing the area without spoiling the environment, and providing citizens with a high-quality environment for living, work, and leisure time activities. While some of those who have provided comments earlier disagree with various specific National Area management actions, the overall preservation and use of the National Area generally contribute to these goals. Cooperation with adjacent publicly owned areas contributes to satisfactory relationships, with some concern remaining over management of Scott State Forest. Lack of resources and staff prevent greater cooperation with the town of Rugby, which is desired by both groups.

State recreation planning indicates the National Area contributes importantly to the supply of public recreation opportunities and to other, related goals. Significant among these are resource preservation and interpretation, provision of appropriate facilities, and the long-term benefit to the economy. All of these are indicated by the National Area's purposes laid out by its legislation. Any apparent inconsistencies would likely be attributable to the limitations referenced previously.

National Area management coordinates with businesses who provide visitor services and attempts to cooperate to achieve the objectives of both parties. Various private land use and business ventures are appearing near and adjacent to the National Area whose objectives do not fully consider the Area's management requirements.

It is important to note that since the National Area was not quickly and fully developed as proposed in the US Army Corps of Engineers' plan for the area, and since further comprehensive planning by NPS was not accomplished, there remains more than a little confusion over just what the National Area is or should be. Its dual designation and legislative provisions have contributed to this. It is fair to say the various opinions that exist on the nature of the Area are justified. Because of the lack of a focused and publicized management concept, National Area personnel continue to struggle with demands from existing and potential users, dealing with

them largely on a case-by-case basis and resulting in some confusion over National Area objectives.

Consequences of Alternative A

Alternative A has been described in the Alternatives section. It is the more rustic of Alternatives A and B, with more of the plateau designated backwoods recreation unit and having enhanced recreation units in fewer areas.

On Long-Term Integrity of Natural Systems

The management units provide protection objectives that are consistent with and support what is required for resource management as discussed in the Required Management section. They acknowledge the various use and development levels allowed by the three units and prescribe appropriate kinds and levels of management.

The Primitive Recreation Unit has the lowest tolerance for degradation and specifies only necessary and minimal interference with natural processes. This prescription for the gorge would provide the highest level of protection for this area, which contains most of the sensitive natural resources. This protection, along with the lowest level of development, i.e., dispersed trails, would do the most to benefit natural systems. This unit application to virtually all streams in the National Area would have the cumulative beneficial effect of supporting state designations and efforts to achieve water quality goals. It would also support the protection of state designated natural features and state and federally designated species of concern.

On the plateau, the other two unit applications allow more development and use, but in the context of the desired resource conditions. Sensitive resources exist on the plateau as well as in the gorge and would be managed for their specific protection objectives, for example, old growth groves and wetlands. Under this alternative, the Enhanced Recreation Unit would be applied only to areas already partly developed. Any future development would necessarily require some land disturbance, but would be located and designed to avoid or minimize impacts. Generally, fairly sizable land areas were included within the Enhanced Recreation Units to allow avoidance of sensitive resources and natural systems. Later planning and appropriate coordination would assure detailed consideration of these concerns.

In contrast to the Enhanced Recreation Units, the designated Backwoods Recreation Units would see less development. Most of these units would not change appreciably from current conditions. The kinds and levels of development that would occur would follow the unit prescription.

The unit prescriptions would result in more focused resource management and protection, which would contribute to a long-term beneficial effect.

The preservation-oriented management of the alternative, with emphasis on the gorge, would stand in distinction to past actions in and outside of the National Area and present actions occurring in many places outside. The success of protecting the integrity of natural systems would depend importantly on achieving and maintaining compatible land and water uses in upstream watershed areas.

On Long-Term Integrity of Cultural Resources

Consistent with the discussion for natural systems above, the management unit applications would support and add focus to what is required in the protection and management of cultural resources.

Most of these resources are found in the defined gorge, such as community and farmstead sites in the narrow tributary valleys, mine and logging camp sites, and rock shelters. The application of the Primitive Recreation Unit to the gorge would provide the most protection for these sites. More detailed planning for these resources would be needed to identify specific treatment, visitor access and use, and interpretation options.

On the plateau, resources including archeological sites and farmstead sites would be recognized and protected through detailed planning consistent with required management and unit prescriptions. Existing, specific protection and interpretation objectives for these resources would be considered. Land areas designated Enhanced Recreation and Backwoods Recreation Units allow for greater use and development but contain sufficient area for siting any development in a manner that would avoid adverse effects. The Enhanced Recreation Unit would allow for appropriate location and construction of needed museum collection storage.

The protection provided by required management, along with that prescribed by management unit, would add cumulatively to the interest and protection goals of the states. Specific coordination procedures currently in

place would assist in the attainment of mutual goals. Significantly, the interest of many nearby residents, some of whom either lived or whose relatives lived in the National Area, is consistent with the resource preservation that would be included in the alternative.

The combined protection objectives of required and prescribed management would have a beneficial effect on cultural resources over the long term.

On Visitor Experience and Access to National Area Resources

The alternative concept and management prescriptions would be consistent with and support legislative and policy direction for visitor enjoyment of resources. The alternative would allow for additional development for ease of access and use. The management units would generally direct where any future development would occur, according to their respective management prescriptions. Specific locations and design would be considered in later planning.

While access to and use of the resources would be enhanced generally, visiting a large percentage of the National Area would require some planning and preparation for most visitors and would likely not be available to some due to interest or ability. Apart from the developments located within the Enhanced Recreation Units, the National Area as a whole would be considered a rustic area.

Visitor satisfaction relates to the degree desires or expectations are fulfilled. The use of management units provides a framework for visitor orientation and education concerning what conditions one may expect in various locations in the National Area. Visitor understanding of what sites or areas are likely to provide the desired experience would increase the possibility for a satisfying visit.

Greater numbers of visitors could lead to conditions less than desired by NPS and the visitor as well. Results could include overcrowding and increased wear and tear on resources. Possible management responses include greater management of visitor use. Managing use would be viewed by some as infringements on personal freedoms. A concerted effort by NPS to orient and educate visitors about the National Area purpose and the need to protect and preserve resources for future generations as well as the present would tend to minimize this concern. Methods of influencing or managing use range from the indirect and subtle to more

direct. The goal would be to achieve the desired conditions with the least disruption of acceptable visitor behavior. Visitor education would be the primary method of managing use, with permits, fees, and enforcement used as necessary.

This alternative would provide the greatest potential for continued wide availability of uncrowded areas and solitude. Legislative restrictions on motor vehicle use in the gorge would necessarily continue. The Enhanced Recreation Units would potentially result in an increase in the number of hunting safety zones as specific sites may be developed for concentrated use. As envisioned in this alternative, ultimately all uses of the National Area would be defined in various planning documents in terms of kinds, levels, and locations for the purposes of visitor enjoyment and safety and resource protection. In keeping with the intent of legal direction, such as the Americans with Disabilities Act, facilities and programs would be accessible to disabled visitors where possible.

Generally, visitors would benefit by finding desirable facilities, concentrated in Enhanced Recreation Units, to make their visits an enjoyable experience. Those seeking a more rustic environment would benefit most by this alternative. The additional, but defined, development envisioned in this alternative would provide increased, long-term and sustainable use of the National Area that would benefit present and future visitors.

On Public Understanding of National Area Resources and Management

This alternative is defined by its concept statement and the application of management units in certain areas. This is in context with the mission of the National Area, all of which would provide a basis for communicating management direction and decisions to the public.

The alternative would benefit public understanding over the long term as opportunities are continuously taken by National Area personnel to communicate elements of the alternative as well as required management. Confusion would likely decrease; however, some honest disagreements may well continue. Overall visitor satisfaction would tend to increase since it would be clearer to them what to expect before arrival.

On an Economic Contribution to the Surrounding Region

The National Area would benefit the economy of the surrounding region most if it could achieve and maintain

the purposes for which it was established. Meeting its purposes would contribute to a sustained level of visitors coming into the area, barring national or regional conditions that would otherwise affect visitor use. This alternative would provide management overall direction.

The identification of long-term goals for the National Area, or desired future conditions, is as critical to the well being of the surrounding communities as it is to the National Area itself. Only then can the communities better understand where the National Area is headed and begin work more in concert. Visitor patterns may change from current ones under this or any other alternative, but they would become more predictable since they would be based on a more clearly identified management direction. Businesses oriented to National Area visitors need to have expectations aligned with National Area goals; and with limits placed on the kinds and levels of development within the National Area, the neighboring communities would better understand the role they should play in providing services. With realized expectations of businesses come additional business ventures.

In comparison with existing conditions, the additional development allowed by this alternative would mean a higher potential for more visitors and their interaction with the surrounding communities.

This alternative would provide additional direction for achieving and maintaining desirable resource conditions and visitor experiences in all of the National Area. Along with more detailed implementation plans and funding, including needed operations funding, this should result in a higher level of sustained use of the National Area over current conditions. This, in turn, would have long-term, indirect benefits for regional businesses serving visitor needs, as well as an increased amount in the communities generally as a portion of expenditures passes to suppliers.

The increased National Area staff associated with this alternative would increase the total salary amount being spent in the local economy.

On Consistency with the Plans of Others

As discussed above, the lack of clearer management direction for the National Area has likely hindered the ability of certain others to plan effectively. The more clearly stated goals of this alternative would help attain beneficial consistency among plans.

Alternative A, with its management unit applications, would appear to provide the desired consistency with state recreation planning. Aside from the basic mandated purposes of the area, the gorge would receive the highest level of protection and the plateau would have potential for additional development. This arrangement would appear to be consistent with local goals as well.

Consequences of Alternative B

Alternative B has been described in the Alternatives section and would provide more facility development potential than Alternative A. More area on the plateau is designated enhanced recreation unit.

In many respects, the consequences of Alternative B on the selected topics are identical or quite similar to those of Alternative A. Regardless of the need for repetition, all consequences are included here to assist in a comprehensive understanding of the Alternative B. To aid in grasping the differences between the consequence discussions of these two alternatives, a parenthetical introductory sentence under each topic states if there are differences. If there are, the different wording is italicized.

On Long-Term Integrity of Natural Systems

(There are a few differences from the Alternative A discussion, which are shown in italics.)

The management units provide general protection objectives that are consistent with and support what is required for resource management as discussed in the Required Management section. They acknowledge the various use and development levels allowed by the three units and prescribe appropriate kinds and levels of management.

The Primitive Recreation Unit has the lowest tolerance for degradation and specifies only necessary and minimal interference with natural processes. This prescription for the gorge would provide the highest level of protection for this area, which contains most of the sensitive natural resources. This protection, along with the lowest level of development, i.e., dispersed trails, would do the most to benefit natural systems. This unit application to virtually all streams in the National Area would have the cumulative beneficial effect of supporting state designations and efforts to achieve water quality goals. It would also support the

protection of state designated natural features and state and federally designated species of concern.

On the plateau, the other two unit applications allow more development and use, but in the context of the desired resource conditions. *The potential for higher use levels under this alternative present a higher potential for irresponsible visitor use and associated impacts such as indiscriminant minor damage to vegetation near developments and along trails.* Sensitive resources do exist on the plateau as well as in the gorge and would be managed for their specific protection objectives, for example, old growth groves and wetlands. *Under this alternative, the Enhanced Recreation Unit would be applied to the same areas designated in Alternative A, plus additional areas.* Any future development would necessarily require some land disturbance, but would be located and designed to avoid or minimize impacts. Generally, fairly sizable land areas were included within the Enhanced Recreation Units to allow avoidance of sensitive resources and natural systems. Later planning and appropriate coordination would assure detailed consideration of these concerns.

In contrast to the Enhanced Recreation Units, the designated Backwoods Recreation Units would see less development. Most of these units would not change appreciably from current conditions. The kinds and levels of development that would occur would follow the unit prescription.

The unit prescriptions would result in more focused resource management and protection, which would contribute to a long-term beneficial effect.

Overall resource protection and management would stand in distinction to past actions in and outside of the National Area and present actions occurring in many places outside. The success of protecting the integrity of natural systems would depend importantly on achieving and maintaining compatible land and water uses in upstream watershed areas.

On Long-Term Integrity of Cultural Resources

(There is a difference from the Alternative A discussion, which is shown in italics.)

Consistent with the discussion for natural systems above, the management unit applications would support and add focus to what is required in the protection and management of cultural resources.

Most of these resources are found in the defined gorge, such as community and farmstead sites in the narrow tributary valleys, mine and logging camp sites, and rock shelters. The application of the Primitive Recreation Unit to the gorge would provide the most protection for these sites. More detailed planning for these resources would be needed to identify specific treatment, visitor access and use, and interpretation options.

On the plateau, resources including archeological sites and farmstead sites would be recognized and protected through detailed planning consistent with required management and unit prescriptions. Existing, specific protection and interpretation objectives for these resources would be considered. Land areas designated Enhanced Recreation and Backwoods Recreation allow for greater use and development but contain sufficient area for siting any development in a manner that would avoid adverse effects. *The potential for higher use levels under this alternative present a higher potential for irresponsible visitor use and associated impacts such as indiscriminant damage to structures and sites.* The Enhanced Recreation Unit would allow for appropriate location and construction of needed museum collection storage.

The protection provided by required management, along with that prescribed by management unit, would add cumulatively to the interest and protection goals of the states. Specific coordination procedures currently in place would assist in the attainment of mutual goals. Significantly, the interest of many nearby residents, some of whom either lived or whose relatives lived in the National Area, is consistent with the resource preservation that would be included in the alternative.

The combined protection objectives of required and prescribed management would have a beneficial effect on cultural resources over the long term.

On Visitor Experience and Access to National Area Resources

(There are several differences from the Alternative A discussion, which are italicized.)

The alternative concept and management prescriptions would be consistent with and support legislative and policy direction for visitor enjoyment of resources. The alternative would allow for additional development for ease of access and use. The management units would generally direct where any future development would occur, according to their respective management

prescriptions. Specific locations and design would be considered in later planning.

This alternative would have the highest potential for increased access to and use of the resources. Visiting much of the National Area would require some planning and preparation for most visitors and would likely not be available to some due to interest or ability.

Visitor satisfaction relates to the degree desires or expectations are fulfilled. The use of management units provides a framework for visitor orientation and education concerning what conditions one may expect in various locations in the National Area. Visitor understanding of what sites or areas are likely to provide the desired experience would increase the possibility for a satisfying visit.

Greater numbers of visitors could lead to conditions less than desired by NPS and the visitor as well. Results could include overcrowding and increased wear and tear on resources. Possible management responses include greater management of visitor use. Managing use would be viewed by some as infringements on personal freedoms. A concerted effort by NPS to orient and educate visitors about the National Area purpose and the need to protect and preserve resources for future generations as well as the present would tend to minimize this concern. Methods of influencing or managing use range from the indirect and subtle to more direct. The goal would be to achieve the desired conditions with the least disruption of acceptable visitor behavior. Visitor education would be the primary method of managing use, with permits, fees, and enforcement used as necessary.

The ability to experience uncrowded areas and solitude would continue to be available in areas of the Primitive Recreation Unit. Legislative restrictions on motor vehicle use in the gorge would necessarily continue. The number of Enhanced Recreation Units would potentially result in the highest number of safety zones as specific sites may be developed for concentrated use. As envisioned in this alternative, ultimately all uses of the National Area would be defined in various planning documents in terms of kinds, levels, and locations for the purposes of visitor enjoyment and safety and resource protection. In keeping with the intent of legal direction, such as the Americans with Disabilities Act, facilities and programs would be accessible to disabled visitors where possible.

Generally, visitors would benefit by finding desirable facilities, concentrated in Enhanced Recreation Units, to make their visits an enjoyable experience. *Those seeking facility-based recreation would benefit most by this alternative.* The additional, but defined, development envisioned in this alternative would provide increased, long-term and sustainable use of the National Area that would benefit present and future visitors.

On Public Understanding of National Area Resources and Management

(There are no differences from the Alternative A discussion.)

This alternative is defined by its concept statement and the application of management units in certain areas. This is in context with the mission of the National Area, all of which would provide a basis for communicating management direction and decisions to the public.

The alternative would benefit public understanding over the long term as opportunities are continuously taken by National Area personnel to communicate elements of the alternative as well as required management. Confusion would likely decrease; however, some honest disagreements may well continue. Overall visitor satisfaction would tend to increase since it would be clearer to them what to expect before arrival.

On an Economic Contribution to the Surrounding Region

(There are a few differences from the Alternative A discussion, which are shown in italics.)

The National Area would benefit the economy of the surrounding region most if it could achieve and maintain the purposes for which it was established. Meeting its purposes would contribute to a sustained level of visitors coming into the area, barring national or regional conditions that would otherwise affect visitor use. This alternative would provide management overall direction.

The identification of long-term goals for the National Area, or desired future conditions, is as critical to the well being of the surrounding communities as it is to the National Area itself. Only then can the communities better understand where the National Area is headed and begin to work more in concert. Visitor patterns may change from current ones under this or any other alternative, but they would become more predictable since they would be based on a more clearly identified

management direction. Businesses oriented to National Area visitors need to have expectations aligned with National Area goals; and with limits placed on the kinds and levels of development within the National Area, the neighboring communities would better understand the role they should play in providing services. With realized expectations of businesses come additional business ventures.

In comparison with existing conditions, the additional development allowed by this alternative would mean a higher potential for more visitors and their interaction with the surrounding communities. *This potential would be highest under this alternative.*

This alternative would provide additional direction for achieving and maintaining desirable resource conditions and visitor experiences in all of the National Area. *Along with more detailed implementation plans and funding, including needed operations funding, this alternative would likely result over the long term in the highest level of sustained use of the National Area.* This, in turn, would have long-term, indirect benefits for regional businesses serving visitor needs, as well as an increased amount in the communities generally as a portion of expenditures passes to suppliers.

The increased National Area staff associated with this alternative would increase the total salary amount being spent in the local economy.

On Consistency with the Plans of Others

(There are no differences from the Alternative A discussion.)

As discussed above, the lack of clearer management direction for the National Area has likely hindered the ability of certain others to plan effectively. The more clearly stated goals of this alternative would help attain beneficial consistency among plans.

Alternative B, with its management unit applications, would appear to provide the desired consistency with state recreation planning. Aside from the basic mandated purposes of the area, the gorge would receive the highest level of protection and the plateau would have potential for additional development. This arrangement would appear to be consistent with local goals as well.

Consequences of Development in Selected Sites

The following consequences could be expected at all the sites listed previously in the Alternatives section where construction of facilities would occur. Alternative B, with its greater amount of development at some sites, would have the potential for more of the identified impacts. Secondary sources, including the National Area's professional staff and others, were consulted for information concerning potential impacts.

The following topics are discussed:

- Soils
- Vegetation
- Wildlife
- Endangered, threatened, and other species of concern
- Water quality
- Floodplains and wetlands
- Air quality
- Cultural resources
- Economic benefits

Soils

Direct impacts would include surface compaction of soils. Site preparation could result in either removal or addition of earth, destroying soil structure. There would be an increase in sheet erosion and reduced water infiltration. These impacts would occur from the construction activity and would be considered long term. Following construction, use of the facilities would likely expand the area of soil compaction and root exposure generally around the facility and along nearby trails. These indirect impacts would also be considered long term, although unacceptable levels of impacts would be identified and corrected through visitor education, site hardening, and/or use management. Rehabilitation of impacted areas would occur where possible. The impact would be considered very minor, in context of the National Area as a whole.

Vegetation

At construction sites, vegetation would be disturbed. Direct impacts would include removal of vegetation, trampling, cutting, girdling, and impacts from objects. These impacts would be generally considered permanent. Indirect impacts would include soil compaction, decreased soil moisture, greater exposure,

and generally a change in environmental conditions, which could lead to loss or slower growth. Exotic species could gain a foothold in the disturbed soils. Efforts to minimize these impacts would include careful site selection, keeping the area of disturbance to the minimum size necessary for the facility, salvaging of topsoil and plant materials for reuse, and rehabilitation of disturbed areas with salvaged and/or native plant materials. The overall effect within the National Area would be minor although noticeable at the specific development sites, especially within the few years following construction.

Wildlife

Animals in construction areas would be directly and temporarily disturbed by equipment and personnel. Some mortality of resident individuals could occur during construction, although this should not adversely affect general populations. Loss of habitat in the disturbed area would be considered permanent although habitat needs would not be significantly reduced. Indirect impacts could include harassment by visitors, habitat deterioration in nearby areas, increased stress and disruption of routines. This impact would last for the duration of the visitor use. Disturbed and developed areas would be relatively small and dispersed throughout the National Area, which should have little effect on habitat availability. Careful site selection and minimizing disturbance of the various sites would keep the overall impact minor.

Endangered, threatened, and other species of concern

There would be no direct impacts expected because of the options available for site selection and accompanying analyses or because of the use of previously disturbed areas. There would possibly be indirect impacts due to increased visitor use and inadvertent contact. Animal displacement or trampling would be possible as well as the trampling or taking of plants. During implementation planning, additional studies would be conducted to identify the possibility and extent of impact and appropriate mitigation measures.

Water quality

Any time ground is disturbed and vegetation is removed, there is potential for soil erosion and an increase in turbidity in nearby waters. Generally, this condition is temporary unless the disturbed area is left alone to further erode. A number of proposed development sites are adjacent to the Big South Fork river or other streams because they provide visitor access to and use of the

waters within the National Area. Roads and trails that cross streams would also contribute to stream turbidity during construction periods and certain maintenance activities. Standard mitigating measures such as silt screens, check dams, retention ponds, and other barriers would be used to minimize erosion and prevent significant short-term deterioration of water quality during any ground disturbance. All disturbed areas would be revegetated to prevent long-term impacts from any runoff. Indirect impacts would include the improper use or overuse of recreation sites that result in pollution and/or siltation. Monitoring of visitor uses and water quality would be an important management activity. No long-term, significant degradation of water quality would be anticipated.

Floodplains and wetlands

Streamside facility development would occur to some extent within the 100 year floodplain; however, NPS has determined that water access facilities are acceptable uses of floodplains. These types of facilities must be in proximity to the water to provide needed visitor access and use. Facility design would consider the likelihood of flooding and would include appropriate visitor warnings. When specific development is determined and sites selected, a wetland impact determination would be made. If appropriate, detailed analysis of potential impacts on wetlands would be provided in the environmental documentation prepared for each development project.

Air quality

During construction, there would be a temporary increase in particulates (fugitive dust) and vehicle emissions where motorized equipment is used. Standard mitigation includes watering the disturbed areas. This would be a temporary condition and would not violate air quality standards.

Cultural resources

Direct impacts would include the long-term preservation of cultural resources as a result of studies conducted that accompany any development. Ground disturbance would have the potential to adversely impact archeological resources, although many of the development sites have been previously disturbed. Prior testing to permit consideration of alternate development sites would be undertaken. If avoidance of impacts on significant resources would not be possible, mitigation measures would be developed in consultation

with the State Historic Preservation Officer and the Advisory Council on Historic Preservation. If any unforeseen cultural resources are discovered, they would be documented and maintained according to NPS guidelines and standards. Indirectly, increased use of these resources would likely result, possibly resulting in physical wear and tear on structures, vandalism, and possible overuse of grounds. Efforts to minimize these effects would include careful determination of resources suitable for on site interpretation to visitors, careful site selection for developments, visitor education, structured use of the site/resource by specific pathways or the use of guides. Adaptive uses, such as at Charit Creek lodge, would help preserve structures and other features. While historic fabric could be affected, prior Historic Structure Reports would document important elements. Monitoring of the resource conditions would be an important management function. All actions that affect cultural resources would be in accordance with the Secretary of the Interior's Standards for Archeology and Historic Preservation.

Economic benefits

Facility construction would result in money spent in nearby communities for materials, labor, and management. This would benefit some individuals and firms. Indirectly, new developments and improvements would accommodate increased visitors to the National Area, which would likely mean additional revenue for local businesses (see previous general discussion).

Sustainability and Long-Term Management

Relationship between local short-term uses of the environment and the maintenance and enhancement of long-term productivity

The resource prescriptions included in the management units, along with required management, are intended to ensure the achievement and maintenance of the purpose for which the National Area was established. All use and development would occur in the context of sustainable resource conditions that, in turn, permit sustained levels of visitor use and satisfaction.

Irreversible or irretrievable commitments of resources

All facility development and use is considered essentially a permanent commitment of resources although removal of facilities and site restoration has

occurred and could still occur. New facilities would be developed on sites that have negligible resource value, which would be specifically considered during detailed implementation planning.

Adverse impacts that cannot be avoided should Alternative A or B be implemented

Adverse impacts that could occur would be associated with facility development and use. Significant adverse impacts should not have to occur since the management units include sufficient area for sensitive facility siting. Standard practice also includes mitigation of all identified impacts. Law, policy, and standard procedures guide these detailed considerations.

Development at or near the river and its tributaries and road and trail development that crosses streams would likely result in increases in turbidity through runoff as previously mentioned. While temporary and localized, these impacts would be considered unavoidable because of the recreation purposes of the National Area and the fact that the focus of many visits is river use in some form.

Some adverse impact would likely be unavoidable to resources, including sensitive resources, because of visitor use. This would be expected to be minor in terms of overall loss, although there is a potential for this to be significant if the loss involves nonrenewable historic or archeological resources.

Monitoring use and resource conditions would assist in avoiding or minimizing adverse impacts and, when coupled with appropriate management strategies, would generally promote sustainable conditions within the National Area. It is a legal requirement for NPS to address carrying capacity issues in general management planning. Based on this requirement, it is NPS policy to establish goals in general management plans for resource conditions and the visitor experience for all areas within the units it administers through the use of management zoning. More detailed quantification of use levels appropriate to those management goals and discussion of possible strategies that could be employed to manage use levels if necessary are then documented in later implementation planning.

The VERP planning process (Visitor Experience and Resource Protection) has been developed by the NPS to follow general management planning to complete the carrying capacity analysis. The VERP process can be conducted separately or incorporated into other

implementation planning efforts. The process consists of four key elements: (1) an area wide management zoning scheme that defines visitor experience and resource condition goals for all locations (accomplished in the general management plan), (2) selection of indicators that can be monitored to ensure that the goals are being met, (3) a systematic monitoring program, and (4) standards for each monitored indicator that is expected to warn when conditions merit management action. Ongoing research will identify meaningful indicators and standards that can be used to ensure provision of quality experiences while protecting National Area resources.

Special Impact Topics

The topics in the table below are in one of the following categories: 1) addressed in this document generally and will be addressed in site-specific detail at the implementation planning stage, 2) will only be addressed at the implementation planning stage, or 3) not applicable in this planning effort because the topic is either not present or the nature of the planning effort has no effect.

Environmental Justice Policy (Executive Order 12898)

This order requires federal agencies to incorporate environmental justice into their missions by identifying

and addressing disproportionately high and adverse human health or environmental effects of their programs and policies on minorities and low income populations and communities. The alternatives would have no such adverse effects.

- The actions identified in the alternatives would not result in any adverse human health effects. Therefore, there would be no direct or indirect adverse effects on any minority or low-income population or community.
- The effects on the natural and physical environment that would occur due to implementation of the alternatives would not significantly and adversely affect any minority or low-income population or community.
- The alternatives would not result in any effects that would be specific to any minority or low-income community.
- The NPS has had a public participation program and has considered all public input regardless of age, race, income status, or other socioeconomic or demographic factors.
- Impacts of the alternatives on the socioeconomic environment would not be expected to significantly alter the physical and social structure of the nearby communities.

Topic	Addressed in this document and in later planning	Addressed only in later planning and design	Not applicable
Consistency with plans and policies of others	●		
Energy conservation		●	
Depletable resource conservation		●	
Urban quality and design of built environment			●
Environmental Justice	●		
Wetlands and floodplains	●		
Prime and unique agricultural lands		●	
Endangered species and other species of concern	●		
Scientific and cultural resources	●		
Critical ecological areas and unique natural resources	●		
Public health and safety		●	
Sacred sites			●
Indian trust resources			●

Table 4 – Special Impact Topics



Appendix A

CONSULTATION AND COORDINATION

Public Involvement

The first of a series of newsletters was distributed in May 1997 to an extensive mailing list of elected officials, agencies, organizations, and individuals. Names have been added as people have become aware of the planning effort, and after six newsletters, the list currently has nearly 500 entries. The newsletters were used to explain the planning process, discuss various influences on that process, announce public meetings, and report back to the public what issues and comments had been received at the various meetings. One of the more important newsletters presented preliminary alternatives and included a mail-back response form. Since the first newsletter, subsequent issues were also made available at local gathering locations at the suggestion of an employee. The newsletters were also included in the National Area's web site.

During the early months of the process, in addition to the first newsletter, numerous officials, agencies, and organizations were sent a letter announcing the process and requesting identification of issues that should be included. This was in addition to regular local contacts by National Area staff at various meetings held by community and service organizations.

In June 1997, nine public meetings were held in different locations to inform people of the planning process and to invite comments on planning issues. Five public meetings were held in four locations in November and December 1998 to present and discuss preliminary alternatives.

Comments received as a result of the early newsletters and the first round of meetings included a wide variety of topics, some of which were not applicable to this planning effort. The following list is a representative sample of comments and indicates if they were considered in the planning effort and if not, why.

Natural and Cultural Resource Related Comments

- Plan should address how to maintain water quality. (*Water quality issues are included and are a part of Required Management; however, "how" to deal with these issues is addressed in the Water Resources Management Plan, an implementation-level plan.*)
- Some of the tributary streams are seriously polluted. (*See comment above.*)
- Need more monitoring of the New River. (*See comment above.*)
- Apply principles of ecosystem management. (*This subject is included in both Required Management and Alternatives and would also be part of implementation planning, i.e., the Resources Management Plan.*)
- Should restore native plant species. (*Included in Required Management and would be part of the Resources Management Plan.*)
- Hunting is good for the ecosystem and no artificial enhancements are necessary. (*Addressed in Required Management and would be part of implementation planning for wildlife management*)
- Restore the grassy woodlands. (*Same as above*)
- Identify the existing and potential resource threats and the level of risk. (*Included generally in Environmental Consequences*)
- Is there a need for boundary expansion to better protect resources? (*Considered early in process—no specific issues raised during scoping—and determined to be generally unnecessary. Small changes for specific reasons may be the subject of future deliberations.*)
- Need to restore historic resources in some form in No Business, Station Camp, and Parch Corn areas for interpretation. (*Not specifically included—addressed by implementation planning, i.e., interpretation plans and cultural resource studies*)
- Preserve areas of natural quiet and solitude.

(Included in Alternatives, most specifically in the Primitive Unit)

- Show how resources would remain unimpaired for future generations. *(Generally included in Required Management and in Alternatives—would also be specifically considered in implementation planning)*
- Need to identify resource carrying capacity and not just continue to allow use to increase. *(Included in the management prescriptions of the Alternatives in a qualitative manner and is a consideration in implementation planning)*
- Wilderness qualities should be enhanced and a portion of the area evaluated for designation. *(Wilderness type qualities—trails only and available solitude—were considered in the Primitive Unit management prescription; however, suitability for congressional designation is a specific type of implementation study and was not considered at this time.)*

Visitor Use Related Comments

- Need more interpretation and programs in the south end. *(Considered generally in alternatives and is a specific subject for the Comprehensive Interpretive Plan—an implementation-level planning effort)*
- Should have more access and facilities. *(Included in alternatives and would be specifically considered in implementation plans)*
- Should not have any more large campgrounds. *(Considered during development of alternatives)*
- Need to complete the trail connections between the south end and the rest of the area. *(Considered in alternatives and a specific subject for the Roads and Trails Management Plan—an implementation-level plan)*
- Need standards for trails. *(General guidance included in alternatives and would be specifically addressed in the Roads and Trails Management Plan)*
- Overnight lodging should be available. *(Considered during development of alternatives)*
- Let the private sector provide lodging. *(Same as above)*
- Less wilderness and more recreation. *(Same as above)*
- More of a certain type of use/facility (or less). *(Alternatives are intended to guide implementation planning)*
- Have more cultural sites available to the public.

(Considered in alternatives and is a specific subject for interpretive planning, cultural resource studies, and facility development planning—all implementation plans)

- Improve the O&W railbed for autos (or close it). *(Considered in alternatives and would be further addressed in the Roads and Trails Management Plan)*
- A theme park should be developed. *(The mandates considered in Required Management would not allow such a facility within the National Area.)*
- A museum should be provided. *(Considered in alternatives and would be considered in detail in an implementation-level plan.)*

Comments received on the preliminary alternatives presented in 1998 were more focused on the content of the alternatives and are summarized in the Alternatives section. They had a significant impact on the final set of alternatives. Several comments dealt with expected funding needed to support the alternatives. The question was basically, “Why plan for more facilities when the NPS can’t maintain what it has and the country has such a budget deficit?” The alternatives include the kinds and levels of development that could occur in various areas, or units, with certain facilities identified for various unit locations that would be developed in response to needs foreseeable over the next 10-15 years. Specific development projects and operational costs would be part of the budget process, which is subject to agency and congressional priorities.

While many comments were provided at meetings and in response forms, letters, and electronic mail, a special effort was made to include the voices of others who may not be included in the normal NPS public involvement methods. NPS requested the University of Kentucky to gather information using ethnographic study techniques in the surrounding counties to identify the preferences and concerns of these people. The common themes appearing in the conversations, interviews, and focus groups reflected and corroborated the substance of comments received through other means. As with other comments received, some are more applicable for implementation planning. One additional theme was the need for better communication, which now has increased recognition.

Recipients of the Draft Plan/ Environmental Impact Statement

Federal Agencies

Advisory Council on Historic Preservation
US Army Corps of Engineers, Nashville District
US Environmental Protection Agency
US Fish and Wildlife Service
US Forest Service, Daniel Boone National Forest

State and Local Agencies

State of Kentucky

Department of Agriculture, Division of Forestry
Department of Fish and Wildlife Resources
Department of Natural Resources
Department of Parks
Kentucky Environmental Quality Commission
Kentucky Heritage Council
Kentucky Nature Preserves Commission
Kentucky Resources Council

State of Tennessee

Department of Agriculture
Department of Economic and Community Development
Department of Environment and Conservation
 Environmental Policy Office
 Division of Air Pollution Control
 Division of Natural Heritage
 Division of Recreation Services
 Division of Water Pollution Control
 Division of Wild and Scenic Rivers and State Parks
Tennessee Historical Commission
Department of Transportation
Tennessee Wildlife Resources Agency

Other State and Local Agencies

Pickett State Park
Pickett State Forest
Scott State Forest
Kentucky Farm Bureau
McCreary County Farm Bureau
Wayne County Farm Bureau
Tennessee Farm Bureau
Fentress County Farm Bureau
Morgan County Farm Bureau
Pickett County Farm Bureau
Scott County Farm Bureau

Fentress County Agricultural Extension Service
McCreary County Agricultural Extension Service
Morgan County Agricultural Extension Service
Pickett County Agricultural Extension Service
Scott County Agricultural Extension Service
Wayne County Agricultural Extension Service
University of Kentucky Wildlife Extension Service
East Tennessee Development District
Upper Cumberland Development District

Organizations

Appalachian Bike Club
Appaloosa Horse Club
Big South Fork Bicycle Club
Big South Fork Hiking Club
Big South Fork Saddle Club
Big South Fork Trail Riders Association
Bluegrass Wildwater Association
Camper and Hikers Association
Chattanooga Arabian Horse Club
East Tennessee Development District
East Tennessee Whitewater Association
Eastern Professional River Outfitters
Elizabethton Trail Riders
Family Campers & RVers
Fentress County Chamber of Commerce
Friends of the Big South Fork NRR, Inc.
Hill and Valley Saddle Club
Historic Rugby
Kentucky Horse Council
Knoxville Arabian Horse Club
Lake Cumberland Area Development District
Lakeview Hills Saddle Club
Laurel County Hiking Club
McCreary County Chamber of Commerce
McCreary County Horse Club
McCreary County Sportsmen
National Parks and Conservation Association
National Trail Ride Association
Paso Fino Association
Pickett County Chamber of Commerce
Pleasure Walking Horse Association of Tennessee
Ridge Riders
Save Our Cumberland Mountains
Scott County Chamber of Commerce
Sierra Club, Harvey Broome Group
Sierra Club, Tennessee Chapter
Sierra Club, Upper Cumberland Group
Smoky Mountain Trail Riders
Southern Kentucky Tourism Development Association
Tennessee Citizens for Wilderness Planning

Tennessee Conservation League
Tennessee Eastman Hiking Club
Tennessee Horse Council
Tennessee Nature Conservancy
Tennessee Scenic Rivers Association
Tennessee Trails and Field Trials Association
Tennessee Trails Association
Tennessee Valley Canoe Club
The Wilderness Society
Upper Cumberland Tourism Association
Upper Cumberland Development District
Woodford County Saddle Club

Individuals

A list of individuals is lengthy and is on file at the National Area.



Appendix B

NATIONAL AREA LEGISLATION

US Code: Title 16, Section 460 ee

Sec. 460ee. Establishment

(a) "Secretary" defined; statement of purposes; boundaries; acquisition of outside sites for administrative, visitor orientation, and recreation facilities As used in this section the term "Secretary" shall mean the Secretary of the Army, acting through the Chief of Engineers. The Secretary, in accordance with the national recreation area concept included in the interagency report prepared pursuant to section 218 of the Flood Control Act of 1968 (Public Law 90-483) by the Corps of Engineers, the Department of the Interior, and the Department of Agriculture, as modified by this section, is authorized and directed to establish on the Big South Fork of the Cumberland River in Kentucky and Tennessee the Big South Fork National River and Recreation Area (hereafter in this section referred to as the "National Area") for the purposes of conserving and interpreting an area containing unique cultural, historic, geologic, fish and wildlife, archeologic, scenic, and recreational values, preserving as a natural, free-flowing stream the Big South Fork of the Cumberland River, major portions of its Clear Fork and New River stems, and portions of their various tributaries for the benefit and enjoyment of present and future generations, the preservation of the natural integrity of the scenic gorges and valleys, and the development of the area's potential for healthful outdoor recreation. The boundaries shall be as generally depicted on the drawing prepared by the Corps of Engineers and entitled "Big South Fork National River and Recreation Area" identified as map number BSF-NRRA(1)(A) and dated October 1972, which shall be on file and available for public inspection in the office of the District Engineer, U.S. Army Engineer District, Nashville, Tennessee. The Secretary may acquire sites at locations outside such boundaries, as he determines necessary, for administrative and visitor orientation facilities. The Secretary may also acquire a site outside such boundaries at or near the location of the historic Tabard Inn in Ruby, Tennessee, including such lands as he deems necessary, for the establishment of a lodge with recreational facilities as provided in subsection (e)(3) of this section.

(b) Transfer of responsibility for planning, acquisition, and development, and administrative jurisdiction to Secretary of the Interior; boundary revisions; acreage limitation. Effective upon November 15, 1990, responsibility for all planning, acquisition, and development, as well as administrative jurisdiction over all Federal lands, water, interests therein, and improvements thereon, within the National Area is hereby transferred to the Secretary of the Interior. The Secretary may complete all acquisition and development activities in progress on November 15, 1990, and the Secretary and the Secretary of the Interior may, by mutual agreement, provide for an orderly and phased assumption of responsibilities (including but not limited to land acquisition and the construction of necessary access roads, day-use facilities, campground facilities, lodges, and administrative buildings) and available funds by the Secretary of the Interior in furtherance of the purposes of this section. The Secretary of the Interior shall administer the National Area in accordance with sections 1, 2, 3, and 4 of this title, as amended and supplemented. The authorities set forth in this section which were available to the Secretary immediately prior to November 15, 1990, shall after November 15, 1990, be available to the Secretary of the Interior. In the administration of the National Area the Secretary may utilize such statutory authority available to him for the conservation and management of wildlife and natural resources as he deems appropriate to carry out the purposes of this section. The Secretary of the Interior may, after transfer to him, revise the boundaries from time to time, but the total acreage within such boundaries shall not exceed one hundred and twenty-five thousand acres. Following such transfer the authorities available to the Secretary in subsection (c) of this section shall likewise be available to the Secretary of the Interior.

(c) Acquisition of property; tracts; exchange and disposal of property; transfer from Federal agency to administrative jurisdiction of Secretary; residential property, right of use and occupancy; fair market value; transfer or assignment;

lifetime residence of tenant or spouse; accrual of obligation or rental to United States; "improved property" defined; mineral rights

- (1) Within the boundaries of the National Area, the Secretary may acquire lands and waters or interests therein by donation, purchase with donated or appropriated funds, or exchange or otherwise, except that lands (other than roads and rights-of-way for roads) owned by the States of Kentucky and Tennessee or any political subdivisions thereof which were in public ownership on October 22, 1976, may be acquired only by donation. When an individual tract of land is only partly within the boundaries of the National Area, the Secretary may acquire all of the tract by any of the above methods in order to avoid the payment of severance costs. Land so acquired outside of the boundaries of the National Area may be exchanged by the Secretary for non-Federal lands within the National Area boundaries, and any portion of the land not utilized for such exchanges may be disposed of in accordance with the provisions of the Federal Property and Administrative Services Act of 1949 (63 Stat. 377; 40 U.S.C. 471 et seq.), as amended. Notwithstanding any other provision of law, any Federal property within the boundaries of the National Area shall be transferred without consideration to the administrative jurisdiction of the Secretary for the purposes of this section.
- (2) With the exception of property or any interest in property that the Secretary determines is necessary for purposes of administration, preservation, or public use, any owner or owners (hereafter in this section referred to as "owner") of improved property used solely for noncommercial residential purposes on the date of its acquisition by the Secretary may retain the right of use and occupancy of such property for such purposes for a term, as the owner may elect, ending either (A) upon the death of the owner or his spouse, whichever occurs later, or (B) not more than twenty-five years from the date of acquisition. The Secretary shall pay to the owner the fair market value of the property on the date of such acquisition, less the fair market value on such date of the term retained by the owner. Such right: shall be subject to such terms and conditions as the Secretary deems appropriate to assure that the property is used in accordance with the purposes of this section; may be transferred or assigned; and may be terminated with respect to the entire property by the Secretary upon his determination that the property or any portion thereof has ceased to be used for noncommercial residential purposes, and upon tender to the holder of the right an amount equal to the fair market value, as of the date the tender, of that portion of the right which remains unexpired on the date of termination. Any person residing upon improved property, subject to the right of acquisition by the Secretary as a tenant or by the sufferance of the owner or owners of the property may be allowed to continue in such residence for the lifetime of such person or his spouse, whichever occurs later, subject to the same restrictions as applicable to owners residing upon such property and provided that any obligation or rental incurred as consideration for such tenancy shall accrue during such term to the United States to be used in the administration of this section.
- (3) As used in this section the term "improved property" means a detached year-round one-family dwelling which serves as the owner's permanent place of abode at the time of acquisition, and construction of which was begun before January 1, 1974, together with so much of the land on which the dwelling is situated, such land being in the same ownership as the dwelling, as the Secretary shall designate to be reasonably necessary for the enjoyment of the dwelling for the sole purpose of noncommercial residential use, except that the Secretary may exclude from any improved property any waters or land fronting thereon, together with so much of the land adjoining such waters or land as he deems necessary for public access thereto.
- (4) In any case where the Secretary determines that underlying minerals are removable consistent with the provisions of subsection (c)(3) of this section, the owner of the minerals underlying property acquired for the purposes of this section may retain such interest. The Secretary shall reserve the right to inspect and regulate the extraction of such minerals to insure that the values enumerated in subsection (a) of this section are not reduced and that the purposes declared in subsection (e)(1) of this section are not interfered with.

d) Hunting, fishing, and trapping; rules and regulations after consultations with State agencies The Secretary, and the Secretary of the Interior after jurisdiction over the National Area has been transferred to him under subsection (b) of this section, shall permit hunting, fishing, and trapping on lands and waters under his jurisdiction within the boundaries of the National Area in accordance with applicable Federal and State laws, except that he may designate zones where, and

establish periods when, no hunting, fishing, or trapping shall be permitted for reasons of public safety, administration, fish or wildlife management, or public use and enjoyment. Except in emergencies, any rules and regulations of the Secretary or the Secretary of the Interior pursuant to this subsection shall be put into effect only after consultation with the appropriate State agency responsible for hunting, fishing, and trapping activities.

(e) Gorge areas division: restrictions, limited motorboat access, operation and maintenance of rail line, access routes, maintenance of roads for nonvehicular traffic, ingress and egress of residents, protection of values; adjacent areas division: restrictions, boundaries; Rugby area; Federal consultations with involved agencies respecting development and management of adjacent National Area; Blue Heron Mine community, restoration; rail and alternative transportation study; report to Congress

- (1) The National Area shall be established and managed for the purposes of preserving and interpreting the scenic, biological, archeological, and historical resources of the river gorge areas and developing the natural recreational potential of the area for the enjoyment of the public and for the benefit of the economy of the region. The area within the boundary of the National Area shall be divided into two categories; namely, the gorge areas and adjacent areas as hereinafter defined.

- (2)

- (A) Within the gorge area, no extraction of, or prospecting for minerals, petroleum products, or gas shall be permitted. No timber shall be cut within the gorge area except for limited clearing necessary for establishment of day-use facilities, historical sites, primitive campgrounds, and access roads. No structures shall be constructed within the gorge area except for structures associated with the improvement of historical sites specified in paragraphs (5), (6), and (8), except for day-use facilities and primitive campgrounds along the primary and secondary access routes specified herein and within 500 feet of such roads, and except for primitive campgrounds accessible only by water or on foot. No motorized transportation shall be allowed in the gorge area except on designated access routes, existing routes for administration of the National Area, existing routes for access to cemeteries; except that motorboat access into the gorge area shall be permitted up to a point one-tenth of a mile downstream from Devils' Jumps and except for the continued operation and maintenance of the rail line currently operated and known as the K & T Railroad. The Secretary of the Interior shall impose limitations on the use of existing routes for access to cemeteries. The Secretary shall acquire such interest in the K & T Railroad right-of-way by easement as he deems necessary to protect the scenic, esthetic, and recreational values of the gorge area and the adjacent areas.
- (B) Primary access routes into the gorge area may be constructed or improved upon the general route of the following designated roads: Tennessee Highway Numbered 52, FAS 2451 (Leatherwood Ford Road), the road into the Blue Heron Community, and Kentucky Highway Numbered 92.
- (C) Secondary access roads in the gorge area may be constructed or improved upon the following routes: the roads from Smith Town, Kentucky, to Worley, Kentucky, the road crossing the Clear Fork at Burnt Mill Bridge, the road from Goad, Tennessee, to Zenith, Tennessee, the road from Co-Operative, Kentucky, to Kentucky Highway Numbered 92, the road entering the gorge across from the mouth of Alum Creek in Kentucky, the road crossing the Clear Fork at Peters Bridge, the road entering the gorge across from the mouth of Station Camp Creek.
- (D) All other existing roads in the gorge area shall be maintained for nonmotorized traffic only, except that nothing in this section shall abrogate the right of ingress and egress of those who remain in occupancy under subsection (c)(1) of this section.
- (E) Road improvement or maintenance and any construction of roads or facilities in the gorge area as permitted by this section shall be accomplished by the Secretary in a manner that will protect the declared values of this unique natural scenic resource.

- (3) In adjacent areas: the removal of timber shall be permitted only where required for the development or maintenance of public use and for administrative sites and shall be accomplished with careful regard for scenic and environmental values; prospecting for minerals and the extraction of minerals from the adjacent areas shall be permitted only where the adit to any such mine can be located outside the boundary of the National Area; no surface mining or strip mining shall be permitted; prospecting and drilling for petroleum products and natural gas shall be permitted in the adjacent area under such regulations as the Secretary or the Secretary of the Interior, after jurisdiction over the national river and recreation area has been transferred to him under subsection (b) of this section, may prescribe to minimize detrimental environment impact, such regulations shall provide among other things for an area limitation for each such operation, zones where operations will not be permitted, and safeguards to prevent air and water pollution; no storage facilities for petroleum products or natural gas shall be located within the boundary of the National Area except as necessary and incidental to production; the Secretary is authorized to construct two lodges with recreational facilities within the adjacent areas so as to maximize and enhance public use and enjoyment of the National Area; construction of all roads and facilities in the adjacent areas shall be undertaken with careful regard for the maintenance of the scenic and esthetic values of the gorge area and the adjacent areas.
- (4) The gorge area as set out in paragraphs (1) and (2) of this subsection shall consist of all lands and waters of the Big South Fork, Clear Fork, and New York River which lie between the gorge or valley rim on either side (where the rim is not clearly defined by topography, the gorge boundary shall be established at an elevation no lower than that of the nearest clearly demarked rim on the same side of the valley), and those portions of the main tributaries and streams in the watersheds of the Big South Fork, Clear Fork, and New River that lie within a gorge or valley rim on either side, except that no lands or waters north of Kentucky Highway Numbered 92 shall be included. The designated adjacent areas shall consist of the balance of the National Area.
- (5) The Secretary, and the Secretary of the Interior, shall consult and cooperate with the Tennessee Historical Commission and the Rugby Restoration Association and with other involved agencies and associations, both public and private concerning the development and management of the National Area in the area adjacent to Rugby, Tennessee. Development within the area adjacent to Rugby, Tennessee, shall be designed toward preserving and enhancing the historical integrity of the community and any historical sites within the boundary of the National Area.
- (6) The Secretary, or the Secretary of the Interior, after jurisdiction over the National Area has been transferred to him under subsection (b) of this section, shall provide for the restoration of the Blue Heron Mine community in a manner which will preserve and enhance the historical integrity of the community and will contribute to the public's understanding and enjoyment of its historical value. To that end the Secretary, or the Secretary of the Interior, after jurisdiction over the National Area has been transferred to him under subsection (b) of this section, may construct and improve structures within and may construct and improve a road into this community.
- (7) The Secretary shall study the desirability and feasibility of reestablishing rail transportation on the abandoned O&W railbed or an alternative mode of transportation within the National Area upon the O&W roadbed, and shall report to Congress his recommendation with regard to development of this facility.
- (8) Improvement of charit creek lodge and historic structures. - The Secretary of the Interior may make improvements to the Charit Creek Lodge and associated facilities and to historic structures determined to be eligible for listing in the National Register of Historic Places. Such improvements shall be made in a manner consistent with the historic scene and the limited ability of the National Area to accommodate additional use and development. Improvements to the Charit Creek Lodge and associated facilities shall be made within the approximately 30 acres of cleared land existing on November 15, 1990, and within carrying capacity limitations determined by the National Park Service.

(f) Federal power and water resources projects; license and other restrictions; limitations inapplicable to external areas. The Federal Energy Regulatory Commission shall not license the construction of any dam, water conduit, reservoir, powerhouse, transmission line, or other project works under the Federal Power Act (41 Stat. 1063) as amended (16 U.S.C. 791a et seq.), within or directly affecting the National Area and no department or agency of the United States shall assist by loan, grant, license, or otherwise in the construction of any water resources project that would have a direct and adverse effect on the values for which the National Area was established. Nothing contained in the preceding sentence shall preclude licensing of, or assistance to, developments below or above the National Area or on any stream tributary thereto which will not invade the National Area or unreasonably diminish the scenic, recreation, and fish and wildlife values present in the area on March 7, 1974. No department or agency of the United States shall recommend authorization of any water resources project that would have a direct and adverse effect on the values for which the National Area was established, or request appropriations to begin construction of any such project, whether heretofore or hereafter authorized, without advising the Secretary or the Secretary of the Interior, after jurisdiction over the National Area has been transferred to him under subsection (b) of this section, in writing of its intention so to do at least sixty days in advance, and without specifically reporting to the Congress in writing at the time it makes its recommendations or request in what respect construction of such project would be in conflict with the purposes of this section and would affect the National Area and the values to be protected under this section.

(g) Transportation facilities; study and establishment. The Secretary shall study transportation facilities in the region served by the National Area and shall establish transportation facilities to enhance public access to the National Area. In this connection the Secretary is authorized to acquire and maintain public roads, other than State highways, necessary to serve the public use facilities within the National Area, and to establish and maintain, at Federal cost an interior and circulating road system sufficient to meet the purposes of this section. Any existing public road, which at the time of its acquisition continues to be a necessary and essential part of the county highway system, may, upon mutual agreement between the Secretary and the owner of such road, be relocated outside of the National Area and if not so relocated such road shall be maintained at Federal expense and kept open at all times for general travel purposes. Nothing in this subsection shall abrogate the right of egress and ingress of those persons who may remain in occupancy under subsection (c) of this section. Nothing in this subsection shall preclude the adjustment, relocation, reconstruction, or abandonment of State highways situated in the National Area, with the concurrence of the agency having the custody of such highways upon entering into such arrangements as the Secretary or the Secretary of the Interior, after jurisdiction over the National Area has been transferred to him under subsection (b) of this section, deems appropriate and in the best interest of the general welfare.

(h) New River plan and programs; transmittal to Congress. In furtherance of the purpose of this subsection the Secretary in cooperation with the Secretary of Agriculture, the heads of other Federal departments and agencies involved, and the State of Tennessee and its political subdivisions, shall formulate a comprehensive plan for that portion of the New River that lies upstream from United States Highway Numbered 27. Such plan shall include, among other things, programs to enhance the environment and conserve and develop natural resources, and to minimize siltation and acid mine drainage. Such plan, with recommendations, including those as to costs and administrative responsibilities, shall be completed and transmitted to the Congress within one year from March 7, 1974.

(i) Water quality protection; interagency cooperation. The Secretary or the Secretary of the Interior, after jurisdiction over the National Area has been transferred to him under subsection (b) of this subsection, shall consult and cooperate with other departments and agencies of the United States and the States of Tennessee and Kentucky in the development of measures and programs to protect and enhance water quality within the National Area and to insure that such programs for the protection and enhancement of water quality do not diminish other values that are to be protected under this section.

(j) Real and personal property tax losses; reimbursement; authorization of appropriations

- (1) Until such time as the transfer of jurisdiction to the Secretary of the Interior authorized by subsection (b) of this section shall take place, for the purpose of financially assisting the States of Tennessee and Kentucky,

McCreary County, Kentucky, and Scott, Morgan, Pickett, and Fentress Counties in Tennessee, because of losses which these jurisdictions will sustain by reason of the fact that certain lands and other property within their boundaries may be included within the National Area established by this section and thereafter will no longer be subject to real and personal property taxes levied or imposed by them, payments shall be made to them on an annual basis in an amount equal to those taxes levied or imposed on such property for the last taxable year immediately preceding March 7, 1974.

- (2) For the purpose of enabling the Secretary to make such payments during the fiscal years ending June 30, 1975, June 30, 1976, June 30, 1977, June 30, 1978, and June 30, 1979, there are authorized to be appropriated such sums as may be necessary.

(k) Authorization of appropriations; prohibition of appropriation from Land and Water Conservation Fund There are authorized to be appropriated \$156,122,000 to carry out the provisions of this section, other than subsection (j) of this section. Costs for the National Area shall be provided in the same manner as costs for national recreation areas administered by the Secretary of the Interior through the National Park Service.



Appendix C

DEVELOPMENT COSTS

These costs are associated with the list of development actions discussed in the Alternatives section. Certain costs are estimated from similar work carried out within the National Area. Other costs are derived from similar development in other NPS areas in the southeastern states. Construction costs only are shown. Maintenance costs are included in the administration cost estimates referenced in the Alternatives section. Costs are rounded and in 1999 dollars.

Yahoo Falls area

Both alternatives: Continue present uses for picnicking and hiking/sight-seeing; improve entrance road. \$1,500,000

Alum Ford

Alternative A: Continue boat access and primitive camping. \$125,000

Alternative B: Continue boat access, improve boat ramp and parking, upgrade/expand camping opportunity, new picnic area. \$573,000

Yamacraw/Highway 92

Both alternatives: Improve existing boat access, improve picnic area on east side of river. \$86,000

Worley

Both alternatives: Continue river access, improve parking and picnicking opportunity. \$313,000

Blue Heron

Both alternatives: Continue preservation and interpretation of mine and town site, continue sight-seeing train opportunity, continue overlook opportunities on both sides of river, continue road access to Barthell, continue campground; add pedestrian loop trail at campground. \$20,000

Bear Creek area

Both alternatives: Improve road access (coordinate with county, pave one-way/one-lane loop, two-way/two-lane to horse camp spur), continue equestrian camping, trailheads, overlook, new connector horse/hiking trail, plus...

Alternative A: Expand equestrian camping, improvements to other existing facilities. \$4,220,000

Alternative B: Same as A, plus developed family campground and associated loop and connecting trails, camp store, interpretive media, picnic area. \$4,668,000

Little Bill Slaven Road/trailhead

Both alternatives: Continue trailhead access.

Station Camp area

Alternative A: Expand equestrian camping, improve road to river with pullouts. \$711,000

Alternative B: Same as A, plus pave circulation roads, pave road to river for passenger vehicles only, new picnic area near river. \$5,976,000

Roads and trails (generally)

Both alternatives: Generally continue road and trail access subject to review of existing routes according to criteria addressing resource protection, visitor experience of users and other visitors, visitor protection and safety, and maintenance capability. Specific uses would occur only on routes designated for those uses as identified in the roads and trails plan. That plan also would identify maintenance standards as well as construction standards for any proposed new trails. (no estimate at this time)

Divide Road to intersection with Bell Farm Road, and Twin Arches Road

Alternative A: Selected safety improvements, rehabilitate existing trailheads. \$3,000,000

Alternative B: Same as A, plus improve entire length to higher standard including paving. \$9,000,000

Charit Creek Lodge

Both alternatives: Continue existing uses; allow improvements within a determined ecological and recreational carrying capacity and consistent with the historic scene—pursuant to National Area legislation—and a commercial use plan. (no estimate at this time)

Bandy Creek/Highway 297 area west of river

Both alternatives: Continue campgrounds, stable, day uses, visitor contact, trails/trailheads, historic preservation/interpretation, administrative functions, access roads; add developed picnic area(s), new loop trails/trailheads, and overlooks, plus...

Alternative A: New visitor center. \$2,295,000

Alternative B: New visitor center having more educational and office space. \$3,788,000

Leatherwood Ford and Highway 297 area east of river

Both alternatives: Continue river access and associated facilities, trails/trailheads, and administrative functions; new overlook and approach road/parking and new museum storage facility. \$736,000

O&W railbed

Both alternatives: East of O&W bridge—Continue passenger vehicle access on county right-of-way; minor improvements to roadbed for visitor safety and resource protection, improve trailheads and river access, evaluate and mitigate resource impacts. West of O&W bridge—identify appropriate uses in roads and trails plan, evaluate and address existing and potential resource impacts. \$1,522,000

Airport Road/confluence area

Alternative A: Improve river access trail, improve approach road (coordinate with county), improve parking. \$262,000

Alternative B: Same as A, plus new overlook and picnic area. \$279,000

River craft launch sites outside National Area (Highway 27/New River and Highway 52/White Oak Creek)

Both alternatives: Continue river access; coordinate improvements with Tennessee Departments of Transportation and Conservation.

Burnt Mill Bridge

Both alternatives: Continue river access.

Honey Creek Overlook

Both alternatives: Continue access to overlook and trails.

Mt. Helen Road area

Alternative A: New primitive camping area, trailhead, and multiple-use trails. \$156,000

Alternative B: Same as A, except developed campground. \$330,000

Areas of oil & gas wells (generally)

Both alternatives: Through applicable regulations and surveys such as the oil and gas inventory, address needs for resource protection and appropriate visitor uses while maintaining legal mineral rights.

Clear Creek corridor

Both alternatives: Extend John Muir hiking trail to Peters Bridge. \$120,000

Joe Branch

Alternative A: Continue picnicking and existing uses.

Alternative B: Same as A, plus trail development. \$40,000

Rugby area

Both alternatives: Continue trail access and coordination on interpretation; add hiking trail linkage to extension of John Muir trail, new developed family campground and associated loop trail system, new district office/administrative functions. \$1,440,000

Brewster Bridge/Highway 52

Both alternatives: Continue river access; improve picnicking. \$15,000

Peters Bridge

Both alternatives: Continue river access and picnicking; improve parking for river access and Muir trail trailhead. \$47,000

Zenith

Both alternatives: Continue access; address safety and resource protection needs, improve crossing of Ice Camp Branch, plus...

Alternative A: Interpretation of townsite, small picnic area. \$2,011,000

Alternative B: Expanded interpretation of townsite, interpretive trail, picnic area. \$2,043,000

Darrow Ridge area

Alternative A: Address needed improvements to selected existing road access, new trailhead, and trails. \$402,000

Alternative B: Same as A, plus additional trails, trailheads, and overlooks. \$700,000

Visitor contact outside of National Area

Both alternatives: Continue contact at Stearns (consider partnership with Forest Service); investigate potential partnerships in Huntsville and Jamestown areas. (no estimate at this time)

Additional cost of completing interpretive wayside program in the National Area and exhibit rehabilitation at Blue Heron added to both alternatives. \$1,175,000



Appendix D

PREPARERS AND CONTRIBUTORS

The following list identifies the NPS personnel most involved with the completion of the General Management Plan/Environmental Impact Statement. Other Big South Fork NRRRA personnel were involved in larger groups.

Palace Anderson, former Roads and Trails Foreman, Big South Fork NRRRA

Steve Bakaletz, Wildlife Biologist, Big South Fork NRRRA

Tim Bemisderfer, Landscape Architect, Southeast Support Office

Ron Cornelius, GIS Specialist, Big South Fork NRRRA

Tom DesJean, Archeologist, Big South Fork NRRRA

Reed Detring, Superintendent, Big South Fork NRRRA

Robert Emmott, Resource Management Specialist, Big South Fork NRRRA

John Fischer, Park Planner, Southeast Support Office, Lead Project Planner

Don Forester, former Chief of Resource Management, Big South Fork NRRRA

Frank Graham, Chief Ranger, Big South Fork NRRRA

Judy Iburg, former Assistant Superintendent, Big South Fork NRRRA

Sue Jennings, Chief of Resource Management, Big South Fork NRRRA

Fred Kelly, former Chief of Maintenance, Big South Fork NRRRA

Wally Linder, Trails Supervisor, Big South Fork NRRRA

Myra Marcum, Biological Science Technician, Big South Fork NRRRA

Barry Melloan, Park Ranger/Visitor Protection, Big South Fork NRRRA

Leslie Morgan, Wildlife Biologist, Big South Fork NRRRA

Jeanne Richardson, former Forestry Technician, Big South Fork NRRRA

Steve Seven, Chief of Interpretation, Big South Fork NRRRA

Etta Spradlin, Biological Science Technician, Big South Fork NRRRA

Wayne Seabolt, acting Chief of Maintenance, Big South Fork NRRRA

Rolland Swain, former Superintendent, Big South Fork NRRRA

Jim Wiggins, former Assistant Superintendent, Big South Fork NRRRA

Ron Wilson, former Management Assistant, Big South Fork NRRRA



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In addition to the publications and reports listed below, special acknowledgment is due the contributions of the staff of Big South Fork National River and Recreation Area, who provided information on resources, visitor use, and management of the National Area through interviews, meetings, and conversations.

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